

## ROTTING FROM WITHIN: AMERICAN EDUCATION AND NATIONAL SECURITY

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# USAWC STRATEGY RESEARCH PROJECT

## **ROTTING FROM WITHIN: AMERICAN EDUCATION AND NATIONAL SECURITY**

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## **ABSTRACT**

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America's Education System (K-12) is not adequately preparing its citizens to compete in the 21st Century global environment. As a consequence, low quality education has become a national security crisis. It is now manifesting in the nation's economic decline, the deterioration of the nation's social fiber, the growing distrust of the nation's political system and its elected leaders, and the increasing difficulties U.S. Armed Forces are encountering in recruiting fully qualified applicants to serve in our nation's Armed Forces. To address this situation, the Department of Defense (DoD) must immediately partner with the nation's educational community and political leaders – from the local to the national level to bring about necessary reforms. This research project focuses on the crisis in education. The paper surveys significant past and present reform initiatives in the American education system (K -12); it compares U.S. and global education statistics (K-12); it identifies problems facing America's education system (K-12); it shows how the nation's education systems impacts national security by identifying the economic, health and fitness, character, values, and citizenship ramifications of the current crisis; and it concludes with recommendations for

educational partnership initiatives among the DoD, other government agencies, and the private sector.



## ROTTING FROM WITHIN: AMERICAN EDUCATION AND NATIONAL SECURITY

Our nation is at risk. Our once unchallenged preeminence in commerce, industry, science, and technological innovation is being overtaken by competitors throughout the world. While we can take justifiable pride in what our schools and colleges have historically accomplished and contributed to United States and the well-being of its people, the educational foundations of our society are presently being eroded by a rising tide of mediocrity that threatens our very future as a nation and a people. What was unimaginable a generation ago has begun to occur – others are matching and surpassing our educational attainments.<sup>1</sup>

National Commission on Excellence in Education (1986)

The striking thing about the statement above is not just what it says, but rather that it was articulated in 1986. The U.S. education system is failing to effectively or even adequately train its citizens to compete in the global community. This crisis has been growing quietly over several decades. Today, this educational crisis is contributing significantly to the economic decline, to the erosion of the nation's social fiber, to its growing distrust of the nation's political system and its elected officials, and to the Armed Forces challenge to recruit qualified applicants to serve in the nation's military. Without doubt, this nation is facing a security crisis as a result of its declining education system. If this issue is not immediately addressed, the nation's future is at risk.

Our nation's security resides in the strength and effectiveness of its primary instruments of power – its diplomacy, its uses of information, its military, and its economy (DIME). Fundamental to the development of these national instruments of power is the ability of the nation's citizens to fill the critical roles inherent in each of these instruments. The nation faces exigent challenges in producing a qualified citizenry to meet these requirements. The inability to fill critical skill requirements with qualified

citizens is not the result of a plot by external terrorist or extremists, or by hostile nation-states, or by groups bent on destabilizing America. Rather, the cause of this situation lies with America's complacency because it has lost sight of the true value of education and its social importance. America's citizens must acknowledge the role of education as the foundational underpinning of our national security. The DoD also must recognize that it can and should play a significant role in partnering with a wide-range of agencies in improving education. DoD is not merely the recipient of products of the nation's education system; DoD's well-being depends on its access to well-educated citizens.

#### Reform Initiatives in American Education - Past and Present

Over the past 200 years, this nation has launched many reform educational initiatives. Correspondingly, its citizens and leaders have debated both the quality and direction of its educational system. Reformers during the Progressive Movement of the late 19th and early 20th centuries attempted to establish consistent academic standards, train selected individuals to become qualified teachers,<sup>2</sup> and consolidated school systems in an effort to make education a profession.<sup>3</sup> During this period, educators such as John Dewey advocated a radical change in how and what schools taught – as well as how schools were administered. Dewey also suggested a 'child-centered' approach, emphasizing much greater classroom independence to encourage students' creativity. This approach advocated a learning-by-doing process, instead of rote memorization. Dewey urged teachers to challenge students to think independently.<sup>4</sup> This concept was challenged in the early 1950s, when the media broadcast "Why Johnny Can't Read." A similar challenge, two decades later, inevitably produced "Why Johnny Can't Write" and showed that children were not learning to read and, more

importantly, comprehend what they were reading.<sup>5</sup> Dewey's child-centric approach was doomed. With the Soviet Union's successful launch of Sputnik, critics of U.S education focused their attention on how we were teaching science and mathematics to our young children.

Later on in the mid-1960s, educational reformers emphasized reading, writing, and comprehension and to a lesser degree science and math. Then in 1965, a dramatic educational initiative materialized with the passing of the Elementary and Secondary School Act of 1965. This legislation was a critical component of the broader "War on Poverty" legislation launched by President Lyndon B. Johnson. The Act provided significant funding to meet the needs of educationally deprived children, especially to systems serving low-income children. This initiative produced several programs: Head-Start Program (a preschool program for disadvantaged children aiming at equalizing equality of opportunity based on their readiness for the first grade); Follow-Through Program (to complement the gains made by children who participated in the Head Start Program); Bilingual Education Program (targeting mainly Spanish-speaking children); and a variety of other guidance and counseling programs all targeted at low-income and disadvantaged children and their supporting school systems.

In 1983 a highly influential report called "A Nation at Risk" called for more resources and greater rigor in the education system. This report claimed that the nation's declining academic standards were a direct threat to America's economic position in the world – and ultimately to national security. The educational community quickly responded by lengthening the school day and year and by placing greater emphasis on core academic subjects, generally at the expense of other subject areas

such as the arts and physical fitness. This emphasis on core-courses was mostly adhered to by America's diverse school systems. However, the initiative to lengthen the school day and week encountered considerable resistance from the students, their parents, and the business community. So it was not universally implemented across the nation.

Some of the more recent educational reforms have attempted to add more competition and raise the standards of the public school system through the introduction of the charter school concept. Charter schools are independent public schools that are not encumbered by the traditional bureaucratic and regulatory constraints of their traditional public school counterparts. Currently over 2,000 charter schools operate in the United States.<sup>6</sup> Variations on the charter school approach also surfaced. Many of these were based on an alliance among the business community and the public and private school systems with the business community having a much greater say in the direction and staffing of the schools and their curriculums. These schools used an approach similar to a traditional workforce corporate model which established measurable standards and goals. Ultimately, the administrators and teachers in such schools were held solely accountable for their student's measurable performance. In this accountability model, many states passed laws that also enabled the closing non-performing or failing public schools — called drop-out factories. When a school is non-performing, the administration has a few options to choose from: (1) reconstitute the school by bringing in a new administrative staff as well as teachers; (2) convert the failed school to a charter-school status; (3) give local families the opportunity to place their children in better-performing schools within the district; or (4) close the school and

provide parents with a voucher that authorizes them to receive funding that covers most (but not always all) the tuition costs at the private schools of their choosing. Proponents of this system believe that the pressures of accountability will improve the overall quality of education.

Vouchers are highly controversial and have been used very sparingly by most school systems. The use of tax dollars to buy the vouchers that would be applied to support private and/or religious schools has drawn intense debate. Currently few school systems have implemented a viable school voucher system. However, the introduction of the voucher system has fueled a strong movement toward privatization and private schools have become a growth industry. Private for-profit companies now operate about 20 percent of the nation's public charter schools.<sup>7</sup> One of the most successful educational enterprises is the Edison Schools, which has charter school programs in 19 states and the District of Columbia. It also provides academic consultants and other services in cooperation with existing public schools in many of the nation's major cities, such as in Chicago.<sup>8</sup>

The National Education Association (NEA) strongly opposes privatization because it creates an ethical conflict between the profit demands of the private companies and the needs of school children attending the private for profit schools. The private for profit companies believe that this type of competition helps to improve the quality of both the public and privatized schools, so it benefits the students. A Rand Corporation study in 2000 concluded that "student achievement gains at Edison Schools matched or exceeded similar improvements in student performance in comparable public schools."<sup>9</sup>

In 2001, the No Child Left Behind (NCLB) Act instituted performance oriented incentives.<sup>10</sup> This Act, like its 1965 predecessor, increased federal funding and mandated teacher and school accountability through frequent testing for all students.<sup>11</sup> NCLB mandated that each state set minimum educational standards for each grade level; it also mandated the steps required to improve the performance schools that do not meet the federally mandated standards. NCLB established the minimum each child should know in the subjects of reading, mathematics, and to a lesser degree, science in grades three through eight. Standardized tests are used nationally to measure the results across the entire American demographic. Along with other accountability measures, these tests are administered annually. Then state-by-state report cards are issued.

Most critics of U.S. education focus on student academic performance. However, the mission and vision statements of many of America's school districts also emphasize the responsibility of the school system to develop upstanding citizens. This priority is often overlooked in the education reform debates. It has been pushed aside in the schools' attempts to focus on reading, English, mathematics, and science – all critical areas needing improvement. But so too is the need to develop citizens who know what America stands for and how they are responsible for contributing to that vision.

Importantly, America's public schools play a vital role in developing citizenship skills. They are obliged to provide an education in citizenship that emphasizes American values and develop in each student a sense of commitment to the community. Our schools should produce active and principled American citizens. Many educational institutions fulfill this responsibility through civic education or civic learning. Such

courses generally place a greater emphasis on knowledge of democratic concepts, institutions, and rights than they do on the practical application of such knowledge to contemporary public policy issues. While the importance of teaching students about American history and institutions, constitutional rights, and obligations of citizenship is undeniable, equally significant are opportunities for students to practice complex civic skills such as problem solving, leadership, persuasive writing and building consensus. Also, they should learn how to communicate with public officials about issues of concern or interest.

### United States and Global Education Trends

America's economy is becoming more and more a knowledge-based environment that creates new jobs based ideas, services and technical innovation. In 2005, the National Association of Manufacturers predicted that by 2010 there would be an estimated 5.3 million high-skill jobs available to qualified workers and 14 million more ten years later.<sup>12</sup> Unfortunately, American's average graduating youth leave high school with an 8<sup>th</sup> grade level of reading, writing and math skills. Over 60 percent of U.S. employers state that high school graduates' English and math skills are far below those required for entry-level jobs.

Compounding this problem are 1.2 million annual high school dropouts who are even less qualified. Across America, a little over 71 percent of all students graduate from high school with a state sponsored diploma. Of the 29 percent who do not graduate each year, over 50 percent of these are from minority groups.<sup>13</sup> Significantly, only fifteen percent of all U.S. high schools produce 80 percent of all the high school dropouts. These schools are referred to as Dropout-Factories. They produce about 69

percent of all African-American dropouts, 63 percent of all Hispanic dropouts, as about 30 percent of all Caucasian dropouts.<sup>14</sup> According to Brenda Welburn of the National Association of School Board Executive (NASBE), “by 2020, over 30 percent of the working-age U.S. population will be either Latino or African-American. Yet these population groups, along with their low-income youngsters, consistently lag farthest behind academically.” These dropouts consequently suffer from reduced earnings and lost opportunities and become a significant social and economic liability for the rest of the nation. Over their lifetimes, dropouts earn about \$260,000 less than a high school graduate.<sup>15</sup> In the class of 2008, these dropouts cost the nation and themselves more than \$319 billion in lost wages over the course of their lifetimes.<sup>16</sup> Moreover, if these dropouts had graduated, the nation could have saved more than \$17 billion in Medicaid and other health related expenditures for uninsured health care over the course of those young people’s lifetimes alone.<sup>17</sup>

Notwithstanding, the U.S. has been the undisputed leader in education for many years. However, about twenty years ago the nation began to lose that undisputed leadership in K-12 education. More recently, it has also begun to see a serious decline in its standing as the world’s best college education. Paradoxically, college enrollment continues to increase in America, but the overall competitiveness of U.S. college graduates is declining.

Comparatively, China’s university system produces twice as many bachelor’s degrees and six times as many engineering degrees as produced in U.S. colleges during the same period. In 2001, India graduated almost a million more students from college than the U.S. including 100,000 more in the sciences and 60,000 more in



engineering. Clearly the educational institutions are not producing as many technically oriented students than several of its current and future competitors. Also, it is not exploiting the intellectual potential of its youth because of sub-standard basic mathematics, science and reading programs. Without well-educated citizens, the nation will lose its competitive advantage and place its future prosperity and security at risk.

### Problems in America's Education System (K-12)

Why are U.S. student doing poorly? A prevalent cause for student failure is their general lack of organizational skills. In order to be successful both in school and life, students must develop and use some fairly basic organizational skills which complement their personalities. However, one organizational system does not fit all. In order to be successful, students must develop a method of tracking assignments and be able to find the necessary material related to a specific course in a quick and efficient fashion. For instance, parents can help by creating a home environment that fosters learning and enables their children to do homework without being distracted by usual household activities. Simple organizational approaches such as buying different colored folders for each class can aid students in bringing the correct course materials to the right class. Similarly, matching the colors of book covers with the course folder color enables the students to gather all necessary materials and books for a specific course.<sup>18</sup> These are just a few examples of the sorts of measures that can dramatically improve student performance.

Also, too many students exhibit poor study habits. Most American students do not really use effective study techniques. Unfortunately, these techniques are not taught as part of the elementary and secondary school curriculum. In fact, most schools

assume that students will learn this critical skill on their own or from their parents. It is likely that all student in their academic life, perceive that their school work is becoming more difficult.<sup>19</sup> They realize that they can no longer get by on their under-developed study skills to meet school and course minimal standards. Psychologists believe that students need to learn how to assimilate relevant information in order to learn. To assimilate information effectively, students benefit from parents who enable them to break down information and retain key bits of information. Recognizing and memorizing key factors is a critical step in learning a new concept. But retention of the concept must also be applied to the next step of analyzing and applying the information in a practical way. When students understand why something is important and are aware of its applicability, the student retains the concept more readily and, as a result, the students learn. In order for them to comprehend ideas, they must understand the facts in context.<sup>20</sup> They must recognize the relevancy of the subject as it relates to their overall environment. Simply put, students must have effective individual learning systems.

Lack of motivation is another cause of educational failure. Low motivation manifest itself through depression, bullying, sexual promiscuity, drug use, reclusiveness and video game and/or computer addiction that prevents healthy social interaction with other children.<sup>21</sup> Because low motivation has several causes, parents and students must communicate effectively in order for parents to assist their students. Parents must continually ask their child what is wrong, why are you not doing well? What is happening in your life? Additionally, parents must continually encourage long-term goal planning with their child. They must show their students how achieving these goals will benefit them now and in the future. Most children in elementary and secondary schools do not

consider their long-term development. Today's students thrive on instant gratification – not the slow and deliberate process of working toward an eventual reward or long-term goal. Thus, parents and teachers must work together to help describe future opportunities and relate those to the current performance of their students.

Poor reading comprehension usually leads to scholastic failure across many academic disciplines. The best way to improve reading is ... to read. However, a reluctant reader will look for any excuse to avoid reading. Experts recommend that parents bring their children to the library on a weekly basis and allow their children to choose texts that appeal to them. Once their child picks out a book or magazine, parents should try to read part of the selected document aloud to spark their interest. If a book-on-tape of a desired text is available, then allow the child to listen to the tape. Encourage them to read aloud as they listen to the tape. This will strengthen their sight reading, increase their vocabulary, and sharpen their pronunciation. It also facilitates reading comprehension.

Difficulties in mathematics can also lead to poor student performance. Math is a sequential learning process where students learn simple math operations, which is then applied to other problems, thus enabling the student to move forward and master even more complex problems based on lower concepts. If a student is struggling with math, parents should try to locate a tutor or trainer who is skilled in identifying the causes of the child's mathematical difficulties. When a child's math skills or any other skills improve, the child's self-esteem and confidence improves as well.<sup>22</sup>

Up to this point the emphasis has been on showing how and why growing numbers of U.S. students fail academically. However, there are many external factors

that negatively influence student performance. For example, if a child is not healthy and rested they will not learn as well as their rested and healthy peers. Students who come to school hungry and tired will not achieve full success, no matter the effectiveness of their teachers. Studies have shown that healthy food intake, which includes low-fat protein and carbohydrates high in fiber, help students to concentrate and learn.<sup>23</sup> Conversely, poor nutrition reduces a student's ability to process information and perform well on exams. Also, the lack of sleep interferes with cognition and emotional stability, thereby preventing students from retaining and analyzing information rationally and accurately.<sup>24</sup> Peer pressure, social interactions among students and self-esteem significantly impact students' success or failure. It is important that parents talk with their children regularly about the issue of peer pressure. Many psychologists believe parents should use role-playing as a way to address smoking, drugs, dating, and bullying issues with their children. These role-playing sessions practically demonstrate effective techniques for avoiding negative peer pressures.<sup>25</sup> Also, students learn best when they feel they are part of something good. That is they must feel like they belong. Parents must encourage their children to participate in activities that enable them to meet more students. It is critical that educators and parents work together to ensure students feel good about themselves. Schools must develop a positive environment which fosters students' self-esteem. And at home parents must reinforce their child's positive image by making their children feel like they are special, unique and most importantly – loved. A contributing factor in the nation's education crisis is the quality of the teachers that serve the education system. We advocate holding our nation's children to national standards, so too must we hold the teachers to a national standard. If we want high

quality teachers, then we must compensate these high quality and proven professionals accordingly. Sadly, U.S. teachers are generally poorly compensated. Starting sanitation workers in New York City are compensated better than starting teachers in that same state. The nation's teaching profession needs an image and salary makeover if we have any hope of improving our education system. Inadequate salaries are a major factor that steers higher quality graduates away from education careers. McKinsey and Company researched the top performing schools in Finland, Singapore, and South Korea. This research found that these countries recruit 100 percent of their teachers from the top third of college graduates seeking careers in education. Conversely, the U.S. recruits only 23 percent of the nation's teachers from the top third of college graduating classes. In schools in high poverty areas, only 14 percent of the teachers are considered the best and brightest among their peer college graduates. Simply put, poor compensation leads to under-qualified teachers, and under-qualified teachers lead to under-educated students.<sup>26</sup>

### Implications of Education Decline

Our nation's ability to compete on the global economic stage will demand of its citizens, and its education system, a fresh approach to public education. Generally, we as a nation take for granted the simple privilege of sending a child out to meet the bus, which takes them off to school across every community in America. However, as special as this privilege is, sending them to an institution that fails to prepare them to compete with their global-peers seems to be flagrantly wasteful of their time and our nation's resources. We now have an education system that is failing our children and our nation as a whole. Americans must demand a fresh and new approach to public education just

as it did in the 1950s when Sputnik shocked us into the reality that this nation was behind the Soviet Union in its ability to produce scientists and mathematicians needed to compete successfully in the race for space. With renewed vigor, our nation responded and we put a man on the moon. Now as then, it must again respond by recognizing that education is the foundation for national competitiveness and the engine that drives prosperity and security. Education is a primary enabler for global preeminence.

A 2006 report, entitled 21st Century Skills, Education & Competitiveness by the Partnership for 21st Century Skills organization declared:

The ingenuity, agility and skills of the American people are crucial to U.S. competitiveness. Our ability to compete as a nation—and for states, regions and communities to attract growth industries and create jobs—demands a fresh approach to public education. We need to recognize that a 21st century education is the bedrock of competitiveness—the engine, not simply an input, of the economy<sup>27</sup>

The ramifications of this decline have begun to manifest themselves in other key areas. A summary of some of these areas which are being severely impacted by this educational decline follows.

*Economic impact.* Substandard education has a direct and destabilizing impact on the nation and its economy. As stated previously, the high school class of 2008 had nearly 1.2 million dropouts. The economic cost of this statistic is staggering. When you compare graduates to not non-graduates, the poverty rate for families headed by graduates is about 3.6 percent; however it jumps to 24 percent for families headed by a high-school dropout. It gets even worse for families with single-mothers without a high school diploma: this poverty rate more than doubles to 49 percent for this group. Approximately 75 percent of state prison inmates and 59 percent of federal prison

inmates have not completed high school. Education would likely reduce this incarceration statistic and strengthen the nation's social fabric. Housing a prisoner annually, costs approximately \$25 thousand dollars whereas it costs between \$10-12 thousand dollars annually for a student's tuition at a public four-year college and approximately \$2,700 annually for community college students. Of all the students currently enrolled in college, 87 percent of students are from the top income quartile, but only 57 percent of students from the lowest income quartile are enrolled.<sup>28</sup> If this enrollment gap continues, the lowest segment of the American population without post-secondary education will increase. Accordingly, the basic skill sets of most U.S. workers will fail to keep pace with the skills required to perform many of the nation's critical jobs. As a consequence, U.S. industry will increasingly look abroad for other sources of qualified workers, which will then reduce the nation's economic strength and its corresponding influence around the world. All of this will have significant and unwanted consequences for the nation's economic, social, and political well-being.

Clearly the lifeblood of any successful business or nation is the relative skill level of its workforce as compared to its competition. This nation was blessed during most of the 20<sup>th</sup> Century with an economy that provided its citizens with a high quality of life unparalleled throughout the world. This economic and social vitality was attributed to average workers' level of education; his increasing productivity; the emergence of a skilled workforce; the abundant technological advances associated with rapid technological change; and the many successfully commercialized innovations resulting from this set of conditions. If this nation's current work force hopes to compete successfully in the 21st century, its citizens must have access to a state-of-the-art

learning system that provides them with the knowledge, skills, and abilities necessary to compete in a continuously changing and complex global environment.

In short, our education system must refocus on the core basics of learning: critical thinking, effective communications, problem-solving, innovation, collaboration, and cultural diversity and awareness. If our nation's students are taught according to these core principles, they will become more analytical, innovative, and ultimately more effective in their fields of employment thereby better able to compete on the globalized economy. The nation will likely benefit from the increased critical and creative energy which could stimulate its currently lagging economy. Undreamed innovations, solutions, and opportunities could enable this nation to prosper.<sup>29</sup> These innovations, solutions and opportunities, in turn will create new jobs, new products, and new services. Energized consumers will purchase these products and services. This commerce will stimulate new jobs and the resultant economic cycle will foster even more economic growth and prosperity.<sup>30</sup>

Given that our competition comes from other foreign governments, it is safe to conclude that globalization drives the demand for a U.S workforce that is knowledgeable of other countries and their cultures and is fluent in all languages of commerce. There is no question that most of the growth potential for U.S. businesses lies in overseas markets. Already, one in five American manufacturing jobs is tied to exports. In 2009, about 40 percent of the revenues for U.S. companies in the broad S&P 500 index were "internationally driven."<sup>31</sup> Foreign consumers, most of whom primarily speak languages other than English, represent significant business opportunities for U.S. producers.



It seems abundantly clear that if U.S. students and workers are to function successfully in the future global economy they must acquire the necessary competitive knowledge, skills, and abilities. This can only be accomplished by their access to a world-class standards-based educational system. The term world-class is bantered about a great deal in education and other disciplines. However, it has actually lost its true meaning when applied to the American education system. In 2007, over fifty sets of academic standards were being touted as world-class standards by nation's various school systems. But when the 'rubber meets the road', and you compare these standards to the rest of the developed and developing world's educational standards, the evidence suggests that this nation's variety of standards do not produce educated graduates as well as our foreign competitors.

*Health and fitness impact.* America must improve the health and physical fitness of the nation's students in order for them to be capable of quality learning. Today, health and fitness are compounding the nation's education problems. Students are fatter, slower, and weaker than their international counterparts in developed nations. Our children have adopted a more sedentary lifestyle at a much earlier age than their parent's generation did when they were children of a similar age. Arguably, the fitness and health problem of today's youth is simply a logical consequence of our children's environment. There are no easy solutions to this problem. But there are specific recommendations that could lead to improvement in this area. First, the most important change must come in the area of health and fitness: we must increase the amount of student's physical activities at school and home. Quality physical education in grades K-12, taught on a daily basis, should be mandated in all school systems. Parents must

also do their part: They must emphasize the importance and the multitude of benefits that can be derived from involvement in fitness-related activities with their children. Parents need to set the example both in exercise and healthy eating. A healthy balance must be established between sedentary activities such as television, computing, and video games and offsetting physical activity. School leaders must fundamentally change how health fitness programs are developed in schools. New testing programs for students should be based on health-fitness guidelines, rather than on athletic performance variables.

Because of a very sedentary lifestyle of many of the nation's children, childhood obesity has reached epidemic proportions. Sadly, obesity is a global problem, especially in the developed and developing nations. In Thailand obesity in 5-to-12 year-old rose from 12.2 percent to 15.6 percent in just two years. But in comparison to the rest of the world, the U.S. is by far one of the most obese nations on the planet. In 2008, more than one billion people world-wide were classified as overweight with over 300 million of them classified as being clinically obese.

Childhood obesity, both in the short-term and the long-term, will come at a great cost to the American economy. Overweight children experience far more medical problems<sup>32</sup> and more miss school days than their leaner classmates. This contributes to parents' higher absenteeism from work, lower productivity, and greater health insurance costs.<sup>33</sup> Approximately 80 percent of overweight adolescents will become overweight adults.<sup>34</sup> Overweight and obese individuals suffer from more chronic health issues and diseases than weight normal individuals. They have greater disability costs and the more complicated recovery from injury or illness results in more costs for treatment,

medications, physical therapy, and rehabilitative services.<sup>35</sup> The cost to employers annually for the health care of obese Americans has doubled in less than a decade and it is estimated to be as high as \$147 billion dollars a year.<sup>36</sup> Obesity accounts for 2.6 percent of total health care costs in several developed countries; some estimates put the figure as high as seven percent.<sup>37</sup> In the U.S., obesity-related medical expenses account for nearly ten percent of total annual healthcare costs and account for 13 percent of private insurance expenditures. Medical expenses associated with obese Americans are 42 percent higher than that for normal-weight individuals.<sup>38</sup> By current estimates, up to 86 percent of Americans will be overweight and 51 percent will be obese by 2030.<sup>39</sup>

School Violence and Learning Environment. Assuming we have rigorous educational standards and physically fit and healthy children, we will still have a national crisis in education. Another area of concern in the nation's schools is the requirement for a safe and secure learning environment. School violence is a subset of youth violence, which is a broader public societal health issue. Youth violence evolves from harmful behaviors that may start early and continue into young adulthood. It includes verbal abuse, bullying, slapping, punching, using weapons, and rape.<sup>40</sup> Victims can suffer serious injury, significant social and emotional damage, or even death.<sup>41</sup> Contrary to the public perception, violent crime in schools has actually declined dramatically since 1994. For example, the 2007 violent crime rate in schools was about 40 per 1,000 students, which was less than half the 1994 rate. This data comes from victim reports collected as part of the National Crime Victimization Survey; it is not derived from school records.<sup>42</sup> The dramatic decline in juvenile homicides (and other juvenile violent crime)

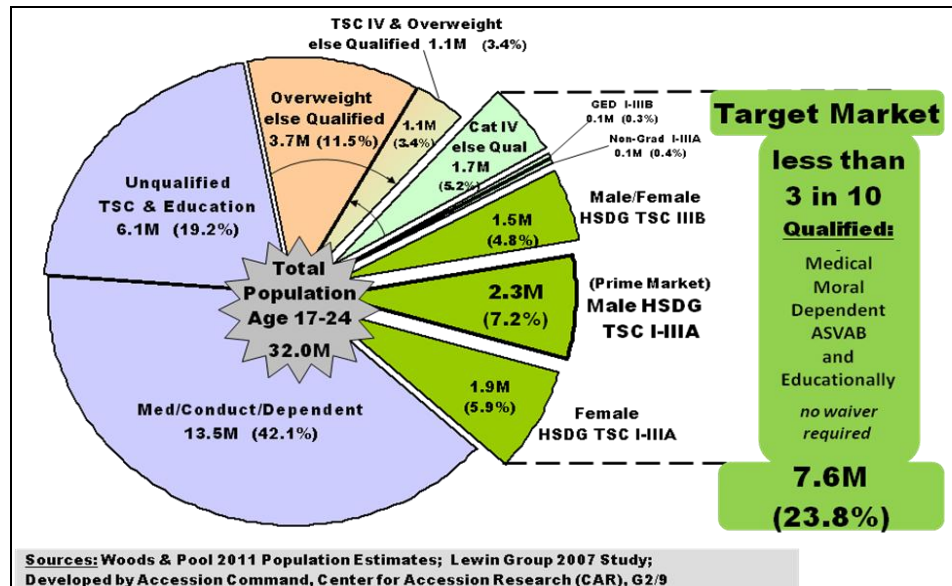
in the 1990s demonstrates that the observed decline in school violence is part of a larger national trend.<sup>43</sup> This decline cannot be attributed to a decline in the juvenile population because the juvenile population has actually increased.<sup>44</sup> This decline can be attributed to a variety of factors including effective community-oriented law enforcement efforts; a decline in drug-associated and gang violence; as well as numerous school and community-based efforts to prevent violence.<sup>45</sup> Similarly, the rate of homicides in U.S. schools has declined substantially since the early 1990s. There was an apparent interruption in this downward trend during a period of highly publicized shootings that may have generated some copycat shootings.<sup>46</sup> However, the number of students who were victims of violent crime in schools has remained relatively stable since 1993. However, males experience almost twice as many incidents as females.<sup>47</sup> Student bullying is one of the most frequently reported discipline problems at school: 21 percent of elementary schools, 43 percent of middle schools, and 22 percent of high schools reported problems with bullying in 2005-06.<sup>48</sup> This data also shows a significant decline since 1995 in students reporting that they “Feel Afraid” in school. However, fear in school is higher for ethnic minority students than any other student groups. Despite improvement in these trends we need to improve the school social environment.

*Citizenship impact.* An area that has been steadily eroding in the nation’s schools is the notion of responsible citizenship. Currently, debates on education reform focus on academic performance, achievement, and student’s readiness for college and the workforce – with health and fitness to a lesser degree. Overlooked in these debates is a very key educational mission that maintains the essence of what this country stands for around the world and that develops active, involved community members, citizens, and

future leaders for the nation. We find in many of the nation's schools that their curriculum focus, and rightly so, are on English, mathematics, science, reading and writing. However, some argue that the primary purpose of public education is to create "informed citizens" who have the knowledge, skills and the will to participate in our government and community affairs. Policymakers and education leaders must encourage and support high-quality citizenship education in our nation's schools.<sup>49</sup> At a minimum, schools and educators can improve civic education by providing instruction in government, history, law, and democracy in both middle and high school. They should also incorporate discussions of current local, national, and international issues and events into the classroom on a regular basis.<sup>50</sup> Additionally, educators should design programs that give students the chance to apply what they learn by performing community service (tied to the formal curriculum and classroom instruction) and through programs that simulate the nation's democratic processes and procedures. School systems must offer extracurricular activities that allow young people to get involved in their schools or communities. Strengthening the quality and increasing opportunities for citizenship education for all students are essential if we expect the next generation of U.S. citizens to be informed and active in their own governance.<sup>51</sup>

Military Recruiting and Accessions Impact. The military, like the private sector, is the direct recipient of products of the American education system. Just as the private sector is looking for the best qualified graduating high school and college student, so too does the military and the federal government. The U.S. Army Accessions Command (USAAC) is the organization that is responsible for bringing enlisted and officer candidates into the Army. This task is far more complicated than it may seem on the

surface. According to USAAC estimates, there are approximately 32 million teens in the ages 17 to 24 (which the Army considers its prime accessions market), however only 7.6 million (23.8 percent) are qualified to enter military service. These are the nation's “cream of the crop” in 17-24 age grouping. They are, as you would expect, highly sought after by the other military services, universities, and corporations and businesses throughout America. Of this 7.6 million which represents the cream of the nation’s crop for that particular age group, only three of ten are qualified to serve in the Army.



Age 17-24 Youth Market (2011) <sup>52</sup>

These young Americans are ineligible for military services for the following categories — Medical, Moral & Criminal, and Educational.<sup>53</sup> Of these 32 million young Americans, 6.1 million (19.2 percent) are not qualified to enter the services because they cannot pass the entrance test or do not have the required high school graduation certification. The services do accept a very small percentage of applicants who have the

equivalent of a high school diploma called the General Equivalency Degree (GED). However, approximately 97 percent of the youth who take the Armed Services Vocational Aptitude Battery (ASVAB) test do have a high school diploma from one of the 50 States or U.S Territories. The ASVAB test is a multiple choice diagnostic test designed to evaluate whether a potential recruit (usually high school sophomores, juniors or seniors) is qualified to enter all the branches of military service. Potential recruits also take the Armed Forces Qualification Test (AFQT). AFQT scores are based on the standard scores from four ASVAB subtests: Arithmetic Reasoning (AR), Mathematics Knowledge (MK), Paragraph Comprehension (PC), and Word Knowledge (WK).<sup>54</sup> AFQT scores are reported as percentiles of 1-99. Thus, an AFQT score of 90 indicates that the examinee scored as well as or better than 90 percent of the nationally representative sample of 18 to 23-year-old youth. An AFQT score of 50 indicates that the examinee scored as well as or better than 50 percent of the nationally representative sample.<sup>55</sup>

The next category of youth disqualification is a kluged grouping which includes the medical, conduct, dependent (more than two children and not married) categories. Of the 32 million eligible to apply, 13.5 million (42.1 percent) were disqualified from military service. The last major area of disqualification is medically related, but is classified as a separate category because of its prevalence in society. This area is the obesity area. Of the 32 million eligible to apply, 3.7 million (11.5 percent) were disqualified due to being classified as overweight/obese.

Contributing to this recruiting challenge is the ever-present national and world environment and its impact on prospective recruits. Research shows that quality early

childhood education raises graduation rates by up to 44 percent and reduces the odds of being arrested for a violent crime by age 18.<sup>56</sup> The quality of the potential applicants who desire to join the Armed Services is a direct reflection of the quality of students the nation's education system graduates each year. In 2009, approximately 162,000 young Americans joined all military components. Of that figure, 70,045 were in the Active and Reserve components of the Army. Over 94 percent of Army recruits have diplomas – a credential held by only about 71 percent of their peers. A traditional high school diploma is the best single predictor of recruiting potential and successful adjustment to a military lifestyle. Nearly 66 percent of today's military recruits come from the top half of their cohort in math and verbal aptitudes. This is a strong indicator of training success and job performance in the military, as well as in the global workplace.

Military recruiting generally mirrors the demographic composition of the U.S. population. Recruits from upper income families are represented at rates relatively consistent with their proportion of the society.<sup>57</sup> More recruits are from families in the mid-scale and upper scale of the socioeconomic strata while less are coming from families with lower earnings. Urban area recruitment is under-represented in America, and suburban and rural areas are over-represented in military recruitment.

Geographically, the South produces 41 percent of all recruits (compared to being only 36 percent of the 18-24 year old population). The Northeast generates 14 percent of new recruits (18 percent of the 18-24 year old population), and the West produces 21 percent of all recruits, and the North Central regions produce 24 percent of new recruits (accounting for 24 percent and 23 percent, respectively, of the 18-24 year old population).<sup>58</sup> Generally speaking, the military's recruitment patterns are basically



proportionate to the breakdown of the general population by socioeconomic classes, but are slightly skewed in their geographic distribution.

This lack of a high quality education jeopardizes the nation's fundamental belief that every American can succeed and serve their nation through military service. Our declining education system has begun to manifest itself in lost jobs, economic decline, and an overall decline in the quality of life of U.S. citizens. When we lose this engine of our economic prosperity, we become weak and vulnerable as a nation. It is our responsibility to fulfill our promise of opportunity to these young Americans. If we do not as a nation live up to this promise, we will lose the very essence that makes America great – the quality of its citizens. Right now America is an economic and a military superpower. However, when it comes to education, we are ranked 19<sup>th</sup> in the world. This is not acceptable. America must return to global leadership in education so that it can ensure our national security now and throughout the 21<sup>st</sup> century.

#### DOD Partnerships with the American Education System

Many national, state, city, and local educational initiatives have been implemented to stem the educational decline in America. It must be acknowledged that the military, although very interested in having the education system produce quality graduates, has little control over how U.S. education will be improved. U.S. society is very sensitive about how much the military involves itself in American culture, and rightly so. Federal, state and local laws, as well as DoD Directives and Regulations – severely restrict (mostly for good reasons) how much the military can be involved helping to solve America's education crisis. As a result, the military has attempted to leverage what it can do. Our military has developed programs and partnerships with the Department of

Education, individual states and localities, private businesses, corporations, and citizens groups that could help reverse the educational decline in America. To illustrate this fine line between our military and the civilian communities, consider the nation's high school Junior Reserve Officer Training Course (JROTC) program. DoD scrupulously avoids the appearance that JROTC is a recruiting tool. JROTC is taught as a means to promote citizenship and to contribute to cadets' physical and emotional health.

This fine line between the military/civilian relationships does not diminish the fact that DOD and the nation's educators share a commitment to the development of young people in ways that stay with them throughout their lives. Both our military and our schools can inculcate the values that support informed citizenship. The product of our education system, its students, feed our military services. It is therefore critical that America's educators and DoD partner to improve the educational quality of the nation's schools. Some of the partner programs listed below have proven to be very successful and should be expanded so more students can share in the benefits they offer.

*Junior Reserve Officer Training Course (JROTC).* Each of the services have programs designed to help educators develop educated citizens. For example, the Army, Navy, Air Force, and Marine Corps each sponsor JROTC programs in America's high schools. These programs are designed to promote quality citizenship by developing the character and leadership abilities of young Americans. They also foster partnerships with communities and their educational institutions. Specifically, JROTC helps young Americans appreciate the ethical values and principles that underlie good citizenship. This program develops leadership traits in each student while enabling them to live and work cooperatively with others. The program teaches students to think

logically and to communicate effectively, both verbally and in writing. It develops the skills they need to work effectively as a member of a team. The program stresses on a daily basis, the importance of physical fitness in maintaining good health. It also emphasizes the importance of high school graduation for future success. Finally, it informs cadets about college and other advanced educational and employment opportunities.

*Junior Reserve Officer Training Course (JROTC Plus).* This is a program that is modeled on the current JROTC Program being taught in 10<sup>th</sup> - 12<sup>th</sup> grade in some of America's public and private schools, but it has been expanded to encompass the middle school years. Currently, the Wichita school district in south-central Kansas is one of a few nationwide systems that offer middle school programs based on the JROTC curriculum.<sup>59</sup> The Army is studying these programs to see if they could provide a model for others nationwide. Wichita's program uses a military structure to teach civics lessons. The Wichita program faced some opposition when it began in 1997 because of concerns about military influence and recruiting. But once parents and administrators learned that the program was leadership based and that nothing in the curriculum focuses on the military, opposition weakened.<sup>60</sup> The program aims are to connect students with education and encourage them to graduate from high school. Statistics show that this program works. Of the eighth-grade students who participate in the 2004 program, 80 percent graduated from high school, compared to a 64 percent graduation rate for those not in the program.<sup>61</sup> Expanding JROTC into the middle school on a voluntary basis can only serve to further develop the connection between the military and local communities. Simply put, the program encourages and enables young

Americans to stay in high school and ultimately graduate — something the military has long valued and encouraged — and something the community greatly values.

*National Defense Cadet Corps (NDCC).* The NDCC program is virtually identical to Army JROTC but it is fully funded by schools and private entities that choose to host a JROTC unit without any financial assistance from the Army. The school incurs all costs: including a share of instructor salaries, uniforms, and daily operational expenses. Currently, there are 25 NDCC units across the United States. The Army does supply curriculum material for instructors and students and is willing to provide all necessary supporting materials required for the conduct of a successful program. Schools hosting a NDCC unit must comply with statutory and regulatory guidance that applies to JROTC units: Specifically NDCC units must employ a minimum of two instructors certified by HQ USACC.<sup>62</sup>

*Office of Naval Research Science, Technology, Engineering and Mathematics (STEM) Program.* This program is designed to identify and attract young scientists to the fields of science, technology, engineering and mathematics (STEM). As part of this effort, the ONR provides programs for K-12 students designed to build excitement about science and careers in science and engineering. Similarly, the Naval Science Awards Program (NSAP) is a joint Navy and Marine Corps program that encourages our nation's students to develop and retain an interest in science and engineering. NSAP recognizes the accomplishments of eligible students at regional and state science and engineering fairs and at the International Science and Engineering Fair (ISEF) for producing and presenting quality science and engineering projects.

*Science and Engineering Apprentice Program (SEAP).* This DoD program places interested and academically talented high school students in science and mathematics as apprentices in DoD laboratories for eight weeks during the summer.<sup>63</sup> These students work with scientists and engineers who serve as the students' mentors. The program offers students a unique and positive experience in their fields of interest and encourages them to pursue careers in science and engineering. Over 35 Navy and Army laboratories participate in the program.<sup>64</sup>

*Civil Air Patrol (CAP).* This Air Force-sponsored program which includes more than 60,000 members in 52 wings — at least one in each state and in Puerto Rico and the District of Columbia. CAP units also operate at several American installations overseas. CAP pursues similar leadership and citizenship goals as does JROTC.

*GED Plus.* This partnership program is sponsored by the Army National Guard, Active and Reserve components. Formerly known as the National Guard Youth ChalleNGe for the National Guard and the U.S. Army Preparatory School for the Active and Reserve Components, the program is community-based. Its mission is to train and mentor at-risk youth so that they become productive citizens.<sup>65</sup> This award-winning program has been recognized as one of America's most effective and cost-efficient programs for assisting young adults who are at the greatest risk of substance abuse, teen pregnancy, delinquency, and criminal activity.<sup>66</sup> Generally, the program helps provide opportunities for young American's to overcome their educational shortcomings. GED Plus enables the Army to reduce the educational deficit of young Americans who made a poor choice early in life when they decided to drop out of high school. The program is offered as a four-week course designed to assist young people who seek to

enlist in the Army to obtain their GED certificate. The program is currently open only for applicants who score in the top 50 percentile on the Armed Services Vocational Aptitude Battery (ASVAB) and those who are not eligible to return to high school.<sup>67</sup> This program is designed to give young Americans a second educational chance that they cannot get elsewhere. It also provides them with the opportunity to serve as an Army Soldier. The prep school also prepares future Soldiers for the rigors of Basic Combat Training (BCT) by also having as a component of the overall programs physical fitness training and discipline regimen. After completion of the prep-school, students are evaluated for possible enlistment into the Army. If for some reason they do not meet the educational or physical standards of the program, they are returned to their hometowns with no prejudices whatsoever. The program's success is illustrated in that over 60 percent of 2008 ChalleNGe candidates received their high school diploma or GED. Overall, over 50 percent joined the work force and 14 percent joined the military. Nearly 28 percent continued their education by either going on to tech school or college.<sup>68</sup> This program has awarded nearly 50,000 academic credentials since 1993<sup>69</sup> with over 92,300 teens graduating as of December 2009.<sup>70</sup>

*Project Pass.* This initiative partners the Army and civilian education administrators in a collaborative effort designed to improve the educational skills of students still in high school to enable them to graduate from their high schools. Its specific goal is to improve graduation rates.<sup>71</sup> The program seeks productive ways of sharing the educational and expert resources of the nation's Army with the education community.<sup>72</sup> It is designed to improve student readiness for higher education, gainful employment, or military service.<sup>73</sup> It seeks to increase educator's understanding of the

benefits of Army service and the educational opportunities available to Soldiers. It supports civilian organizations in meeting their commitment in providing sound education to all of the nation's students.<sup>74</sup>

*Chicago Public Schools Military Academy.* In 1999, Chicago schools opened eight small military academies within other schools, each enrolling 150-350 students. The Chicago Public School System is the third-largest school system in the United States. It has the largest military program of any school district in the nation, with more than 10,000 cadets in its high schools and middle schools.<sup>75</sup> The Chicago Military Academy boasts a 98 percent graduation rate and 97 percent attendance rate. This success has led to a partnership among the City of Chicago, the Federal government, and the Naval Service Training Command to construct a new Naval Academy Prep School for Chicago's high school students.

These are just a few tangible examples of how DoD and the nation's communities are partnering to help solve our educational crisis. Many other initiatives have been undertaken to alleviate the education crisis. If we are ever going to be able to reverse this education crisis, all of these partnership programs must be continued and receive full funding. Moreover, they should be expanded to other urban and rural areas that could benefit from these types of quality leadership and citizenship programs in their local schools and communities to improve the overall quality of America's youth today and into the future.

According to NASBE, educational leaders must also consider other ways to solve the education problems. First, they must examine their current policies to ensure that these policies do not hinder student participation in programs that help students become

productive and responsible citizens.<sup>76</sup> Next, they must consider developing cognitive and non-cognitive assessments, such as the Armed Service Vocational Aptitude Battery, to serve as diagnostic tools to help students plan for their transition from secondary education to continued education or a professional career.<sup>77</sup> Next they must leverage their authority over state school counseling mandates, guidance counselor certification requirements and school counseling programs to enable counselors to better inform students and parents about education programs and strategies, “including military-themed programs,” and help them create a postsecondary high school graduation plan that examines all options: work, college, or the military.<sup>78</sup> By doing these things, educational leaders provide more options for students and thereby better position them to become a productive member of society.

### Conclusion

It is well recognized that education is a key enabler for economic growth, and our economy helps drive our nation. Providing high-quality education for all children is critical to America’s prosperity and security. Education has also been an enabler for achieving the American dream. Education provides opportunities for millions of American families and immigrants. America’s economic competitiveness depends on providing every child with an education that allows them to achieve their maximum potential.<sup>79</sup> However, America’s K-12 education system is not positioning America’s youth to compete in today’s global environment.<sup>80</sup> America’s education system must be improved to support the needs of the nation. However, there are no silver-bullet solutions to solving the educational crisis in America; rather it will require a comprehensive set of synchronized initiatives to bring about needed reform with most



requiring significant resources. As Derek Bok of Harvard has observed “If you think education is expensive, try ignorance.”<sup>81</sup>

The following initiatives could yield an overall improvement in quality and character of the American education system: redesign the education process; adopt a model that includes both an academic (college) and a technical path; expand Project Pass; expand the STEM initiative; institute mandatory teacher qualification and re-certification procedures; increase private and public educational partnerships; enhance the image of the education profession and teaching; and, reinstate mandatory fitness and citizenship training for all K-12 students.

An assessment of the nation’s education and workforce reveals some disturbing trends: high dropout rates, low on-time graduation rates; high unemployment for many high school and college graduates; increases in businesses that import skilled workers; small numbers of highly qualified science, technology, engineering and mathematics teachers (STEM); and shrinking numbers of students graduating in the STEM subject areas and pursuing STEM-related jobs. In July 2008, the Education Commission of the States (ECS) released *From Competing to Leading: An International Benchmarking Blueprint*. This blueprint was created in response to growing concerns about the poor quality of education and low competitiveness of our graduates compared with students around the world.<sup>82</sup> Business leaders have voiced concern that the nation’s educational system is not developing skilled graduates able to contribute effectively in the future workforce environment. The report lists deficiencies across important “21st century survival skills” that includes: critical thinking; problem solving; collaboration and teamwork; exercising initiative; leadership; entrepreneurialism; verbal and written

communication; assessing, evaluating, and analyzing information; creative thinking; and the real-life applications of educational concepts and topics.

Changing the U.S. education system is possible, but requires a whole government and society approach. The problem must be confronted along multiple paths involving federal, state, and local and governments as well as private entities. DoD must expand its contributions to the national effort. All private and public entities have a role in achieving a positive outcome and all will share in the rewards of success or the consequences of failure.

The future American classroom will be dramatically different from the classrooms of today, much less the one-room schoolhouse of 100 years past.<sup>83</sup> However, the overall purpose of education has not changed nor has its ultimate benefits: a good education brings together a growing and extremely diverse nation. Quality educational programs reinforce and pass on the lasting values of freedom and human dignity from one generation to the next. If this nation does not confront this staggering decline in the quality of American education and treat it as the critical national security issue that it is, then it is likely that the U.S. we know and cherish will suffer irreparable harm to our culture, society and economic prosperity.

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